

REMARKS

Claims 1-14 are pending in the application, of which claims 13 and 14 have been withdrawn from consideration. Claim 11 has been amended.

Applicants thank the Examiner for the indication of allowable subject matter.

Claim 1 stands rejected under 35 USC 112 , second paragraph, as being indefinite. In maintaining this rejection from a prior Action, the Examiner repeats:

Regarding claims [sic] 1, the negative limitation “the area of the second separable [sic] addressable [sic] sub-pixel is not substantially a multiple of the area of the first separable [sic] addressable sub-pixel” renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention.

Regarding Applicants’ previously submitted arguments addressing this rejection, the Examiner states:

Furthermore, with respect to the 112 Rejection (see page 7 of the Remarks), it is noted that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 U.S.P.Q.2d 1057 (Fed. Cir. 1993).

Applicants respectfully traverse this rejection.

For reasons explained in the Amendment filed February 8, 2007, the above-quoted claim language does not render claim 1 indefinite. Applicants further traverse the implication of reading limitations from the specification into the claims. In their previous arguments addressing this rejection, Applicants cited the specification merely to demonstrate that the specification is consistent with and provides support for the well known definition of the term “multiple”.

Thus, in light of the plain meaning of the term “multiple” and in accordance with Applicants’ prior arguments, Applicants respectfully request reconsideration and withdrawal of the 35 USC 112 rejection.

Claim 11 stands objected to because of a typographical error. Applicants have amended claim 11 to replace the identified semicolon with a colon in accordance with the Examiner’s instruction.

Claims 1-12 stand rejected under 35 USC 103(a) over Applicant Admitted Prior Art (AAPA) in view of Silverbrook (U.S. Patent No. 5,805,136).

The Examiner states that Figure 16 of Silverbrook shows that areas 57, 56 and 59 collectively form an area of 6 units and that areas 58, 60 and 61 collectively form an area of 8 units. Applicants take it that the Examiner considers each of these collective areas to comprise a sub-pixel. Applicants believe that the Examiner has made a typographical error in making the rejection as Silverbrook actually states that areas 59, 58 and 57 collectively have an area of 8 units (col. 6, lines 47-49), that area 56 has an area of 2 units (col. 6, line 46) and that areas 60 and 61 collectively have an area of 4 units. It is apparent that for the Examiner's combinations to have the values cited, area 58 would have to have an area equal to 4 units. Applicants can find no teaching in Silverbrook that suggests that area 58 has such a value. Further, area 58 is addressed by the same drive line as areas 57 and 59 and therefore can't realistically be separated therefrom.

Applicants presume, therefore, that the Examiner meant that areas 59, 58 and 57 collectively have an area of 8 units and that areas 60 and 61 (4 units) plus area 56 (2 units) collectively form an area of 6 units.

The Examiner is therefore grouping areas 60 and 61 together with area 56, and calling the resultant grouping the first separately addressable sub-pixel. It is clear, however, that area 56 is a separately addressable area driven by drive line 52 (col. 6, lines 45-46). Areas 60 and 61 are driven by drive line 54 (col. 6, lines 49-50) and so form a second separately addressable area. Thus Applicants submit that area 56 comprises one sub-pixel and areas 60 and 61 (which have to be driven together) collectively form a second sub-pixel.

It is acknowledged that areas 60 and 61 can be addressed at the same time as area 56. Figure 17 shows the various pixel states which can be achieved and it is seen that areas 60 and 61 are set to the same state as area 56 to achieve level 6. They are also set to the same state, along with other areas of the pixel, to achieve levels 7, 14 and 15. However it is equally clear that area 56 can be addressed separately to areas 60 and 61 and can be set to a different state. Level 11, for instance, has area 56 in a first state (e.g. black) but areas 60 and 61 in a second

state (white), whereas level 12 has area 56 in the second state (e.g. white) and areas 60 and 61 in the first state (white).

Thus, while area 56 can be addressed to have the same state as areas 60 and 61, it can also be addressed to have a different state and, indeed, this is essential for correct operation of the device described in Silverbrook. Hence area 56 is clearly a separately addressable area.

Claim 1 of the present application specifies a light modulating device having at least one pixel comprising a plurality of separately addressable sub-pixels of different areas. Thus, as defined by the claim, each separately addressable area is a sub-pixel. The claim then requires that the area of a first (singular) separately addressable sub-pixel is smaller than the area of a second (singular) separately addressable sub-pixel and that the area of the second sub-pixel is *not* substantially a multiple of the area of the first sub pixel.

Silverbrook teaches a device with four separately addressable areas. Col. 6, lines 43-44 specifically refer to four areas that can be independently driven. Thus Silverbrook teaches four sub-pixels. The areas of these sub-pixels are arranged in the relationship 1:2:4:8. It can therefore be seen that, taking any two sub-pixels, the area of the larger sub-pixel is indeed a multiple of the area of the smaller sub-pixel.

The Examiner also refers to Figures 1 and 2, which show a device which is prior art to the invention of Silverbrook and which, according to the Examiner, shows a pixel having “one sub pixel area (3, 4, 5) having 7 units and sub pixel area (2) having 8 units”. It is noted that each of areas 2-5 are clearly said to be an independently illuminable area (col. 3, lines 17-20), i.e., separately addressable. Hence areas 3, 4 and 5 comprise individual sub-pixels. The ratio of the areas of these sub-pixels is said to form a binary relationship (col.3, line 19), i.e. a ratio of the form 1:2:4:8. Thus, the device described with reference to Figures 1 and 2 of Silverbrook again comprises four sub-pixels, and again the area of each larger sub-pixel is a multiple of the area of a smaller sub- pixel.

Therefore it is respectfully submitted that Silverbrook does teach a plurality of sub-pixels, but specifically teaches that the area of a larger sub-pixel should be substantially a multiple of a smaller sub-pixel. This is in contrast to the requirement in claim 1 that the area of

the larger sub-pixel is *not* substantially a multiple of the area of the smaller sub-pixel. As such, Silverbrook actually reinforces the teaching of the prior art disclosed in the specification at page 5, lines 23-31.

Applicants therefore respectfully submit that it would not be obvious to modify the device of Silverbrook or the AAPA to depart from the conventional teaching regarding sub-pixel area ratios. It is further submitted that the claims 2-12, which depend from claim 1, are patentable for at least the reasons provided with respect to claim 1.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejections of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. **03-1952** referencing docket no. **527122000300**.

Dated: July 27, 2007

Respectfully submitted,

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